

CLAIMS:

1. An isolated polypeptide comprising an amino acid sequence which has at least 85% identity to the amino acid sequence selected from the group consisting of: SEQ ID NO:4
5 and SEQ ID NO:6.
2. An isolated polypeptide as claimed in claim 1 in which the amino acid sequence has at least 95% identity to the amino acid sequence selected from the group consisting of: SEQ ID NO:4 and SEQ ID NO:6.
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3. The polypeptide as claimed in claim 1 comprising the amino acid sequence selected from the group consisting of: SEQ ID NO:4 and SEQ ID NO:6.
4. An isolated polypeptide of SEQ ID NO:4 and SEQ ID NO:6.
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5. An isolated polypeptide of SEQ ID NO:2.
6. An immunogenic fragment of the polypeptide as claimed in any one of claims 1 to 5 in which the immunogenic activity of said immunogenic fragment is substantially the same
20 as the polypeptide of SEQ ID NO:4 or SEQ ID NO:6.
7. An isolated polynucleotide comprising a nucleotide sequence encoding a polypeptide that has at least 85% identity to the amino acid sequence of SEQ ID NO: 4 or 6 over the entire length of SEQ ID NO: 4 or 6 respectively; or a nucleotide sequence complementary
25 to said isolated polynucleotide.
8. An isolated polynucleotide comprising a nucleotide sequence that has at least 85% identity to a nucleotide sequence encoding a polypeptide of SEQ ID NO: 4 or 6 over the

entire coding region; or a nucleotide sequence complementary to said isolated polynucleotide.

5 9. An isolated polynucleotide which comprises a nucleotide sequence which has at least 85% identity to that of SEQ ID NO: 3 or 5 over the entire length of SEQ ID NO: 3 or 5 respectively; or a nucleotide sequence complementary to said isolated polynucleotide.

10 10. The isolated polynucleotide as claimed in any one of claims 7 to 9 in which the identity is at least 95% to SEQ ID NO: 3 or 5.

11. An isolated polynucleotide comprising a nucleotide sequence encoding the polypeptide of SEQ ID NO:4 or SEQ ID NO:6.

15 12. An isolated polynucleotide comprising the polynucleotide of SEQ ID NO:3 or SEQ ID NO:5.

20 13. An isolated polynucleotide comprising a nucleotide sequence encoding the polypeptide of SEQ ID NO:4 or SEQ ID NO:6, obtainable by screening an appropriate library under stringent hybridization conditions with a labeled probe having the sequence of SEQ ID NO:3 or SEQ ID NO:5 or a fragment thereof.

14. An isolated polynucleotide comprising a nucleotide sequence encoding the polypeptide of SEQ ID NO:2.

25 15. An isolated polynucleotide comprising the polynucleotide of SEQ ID NO:1.

16. An isolated polynucleotide comprising a nucleotide sequence encoding the polypeptide of SEQ ID NO:2, obtainable by screening an appropriate library under stringent

hybridization conditions with a labeled probe having the sequence of SEQ ID NO:1 or a fragment thereof.

- 5 17. An expression vector or a recombinant live microorganism comprising an isolated polynucleotide according to any one of claims 7 - 16.
- 10 18. A host cell comprising the expression vector of claim 17 or a subcellular fraction or a membrane of said host cell expressing an isolated polypeptide comprising an amino acid sequence that has at least 85% identity to the amino acid sequence selected from the group consisting of: SEQ ID NO:4 or SEQ ID NO:6.
- 15 19. A process for producing a polypeptide comprising an amino acid sequence that has at least 85% identity to the amino acid sequence selected from the group consisting of SEQ ID NO:4 or SEQ ID NO:6 comprising culturing a host cell of claim 18 under conditions sufficient for the production of said polypeptide and recovering the polypeptide from the culture medium.
- 20 20. A process for expressing a polynucleotide of any one of claims 7 - 16 comprising transforming a host cell with the expression vector comprising at least one of said polynucleotides and culturing said host cell under conditions sufficient for expression of any one of said polynucleotides.
- 25 21. A vaccine composition comprising an effective amount of the polypeptide of any one of claims 1 to 6 and a pharmaceutically acceptable carrier.
22. A vaccine composition comprising an effective amount of the polynucleotide of any one of claims 7 to 16 and a pharmaceutically effective carrier.

23. The vaccine composition according to either one of claims 21 or 22 wherein said composition comprises at least one other *Neisseria meningitidis* antigen.
24. An antibody immunospecific for the polypeptide or immunological fragment as
5 claimed in any one of claims 1 to 6.
25. A method of diagnosing a *Neisseria meningitidis* infection, comprising identifying a polypeptide as claimed in any one of claims 1 - 6, or an antibody that is immunospecific for said polypeptide, present within a biological sample from an animal suspected of
10 having such an infection.
26. Use of a composition comprising an immunologically effective amount of a polypeptide as claimed in any one of claims 1 - 6 in the preparation of a medicament for use in generating an immune response in an animal.
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27. Use of a composition comprising an immunologically effective amount of a polynucleotide as claimed in any one of claims 7 - 16 in the preparation of a medicament for use in generating an immune response in an animal.
- 20 28. A therapeutic composition useful in treating humans with *Neisseria meningitidis* disease comprising at least one antibody directed against the polypeptide of claims 1 - 6 and a suitable pharmaceutical carrier

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